

Prof. Douglas' Interesting Address

(Continued from Page Three.)

to inexperience, and which must necessarily occur during the premature development of mines on a large scale, I can therefore appreciate the impossibility of avoiding them altogether.

"The few remarkable instances out of many which I have quoted, of waste on a national scale, it may not be within the power of many or any of us to remedy. But we shall all have to consider again and again what provision can be made to preserve valuable material for future treatment, which, at the moment, is virtually waste.

Treating Lower Grade Ores.

"It is difficult to forecast the future and to anticipate the economical changes which time will bring with it, but of this we may be certain, that the drift of events will be inevitably toward lower treatment charges and therefore the utilization, not only of lower grade ores, but what is today actually rejected as waste.

"In mining therefore, it is better to store at surface, if the character of the ore will permit it, lower grade ores than to bury them in the stope as filling, under the certainty that the day is not distant when they will be valuable, or if they must be left underground separate the ore, no matter how low, from actual waste. It may cost a trifle more at first to do so, but in the end it will pay, and the end must always be kept in view.

"I have to do with a mine which, when first worked, was 125 miles from a railroad, and the standard of the ore fed to the furnace was fixed by the management at 18 per cent of copper. With lower freight and cheaper fuel, the standard was reduced to 12 per cent. Now it is between six and seven per cent.

Gradation of Wastes.

"During the first stage, 12 per cent was waste; during the second, seven per cent was waste. Today it would be rash to count any copper bearing material as actual waste. But at each stage of development the ore rejected for the moment was treated as worthless and thrown as such into the stope. From there it can be recovered though at needless cost.

"As, however, the property has changed hands since the early days, the original owners would deride the suggestion that for the good of their successors they should have incurred a dollar of unnecessary expense. In very truth, however, the property would not so often have changed hands had the future and not the immediate present been more prominent in the calculations of each successive administration.

"The ores of the Arizona mines have changed, and so have the method of treatment. For years it was considered that with the appearance of sulphur would their rapid decline. Then that pernicious element was regarded as worse than waste. Today it is in urgent demand, for, with the introduction of the pneumatic method and the cleaner slags made by matte smelting, it is found cheaper to make copper from a sulphide mixture, though by several operations, than from carbonate ores by a single furnace treatment.

"Moreover, we are everywhere re-smelting the rich slags formerly made, though, unfortunately, at certain furnaces they were considered as of such little prospective value as to have been granulated and run into the river or so dumped that they have been washed away.

"We were not to blame for making copper direct from carbonate ores, though it involves waste, for sulphurated ores were not obtainable and it would not have paid to reduce a sulphide charge by the older methods in vogue 20 years ago. But we were at times to blame for not believing that metallurgy and railroading and all associated industries would rapidly advance and put cheaper methods, cheaper fuel, cheaper transportation within our reach, and thus change what was then waste into valuable material.

Waste of Precious Metals.

"The same has been eminently true of the waste from gold, silver and copper concentrating mills. Only some 60 per cent of the hundreds of millions which the Comstock lode yielded was recovered at the time, and yet at first those enormously rich tailings were not even collected. Such was the haste of the miner to empty that stupendous deposit which should have made Nevada prosperous for generations, instead of whirling the whole country into a mad dance of reckless speculation.

"And at Anaconda there are said to be tailings by the millions of tons which will run from two to two and a half per cent of copper, made when a large production rather than minute economies was the order of the day.

"The values locked up in our Arizona slags, in the Comstock slimes, in the Anaconda tailings, all represent a large waste and heavy loss, even though they may be in part recovered by subsequent treatment."

A disordered stomach may cause no end of trouble. When the stomach fails to perform its functions the bowels become deranged, the liver and kidneys congested, causing numerous diseases, the most fatal of which are painless and therefore the more to be dreaded. The important thing is to restore the stomach and liver to a healthy condition, and for this purpose no better preparation can be used than Chamberlain's Stomach and Liver Tablets. For sale by all druggists.



ANCIENT.

"Old Mr. Boreleigh's horse stories are becoming positively insufferable." "Sort of horse-chestnuts, as it were."

2nd Improvement.

You wouldn't know the Hotel Ord now in Douglas. The hotel has been completely renovated and refurbished, and Landlord Elwood Madden is adding to the popularity of the house daily. Pete Lepach presides at the bar, and all will remember Pete at the L. & O. in Bisbee. 3-9-1m.

Mrs. Rich has received a new supply of perfumes, powders, hair tonics. She also has on hand plenty of Yanola Cream, which is famous for removing blackheads, tan, and beautifying the complexion. Have you ever tried L. a Montez face bleach? If not, call on Mrs. Rich. She always has some on hand.

Call on York Transfer for all kinds of hauling. Prompt attention given to all orders. 4-13-1m.

ARTICLES OF INCORPORATION. OF THE BROPHY CARRIAGE COMPANY.

Know all men by these presents: That we, James E. Brophy, Thomas J. Brophy and Hugh J. Brophy, all of Bisbee, Cochise county, Territory of Arizona, have this day voluntarily associated ourselves together for the purposes of forming a corporation under the laws of the Territory of Arizona, and we do hereby certify, acknowledge, and adopt the following articles of incorporation.

I. The name of said corporation shall be "Brophy Carriage Company" and the principal place of business of said corporation shall be at Lowell, near town of Bisbee, Cochise County, Arizona, with such other offices at such other places as the board of directors may determine.

II. The general nature of the business proposed to be transacted by said corporation is as follows: To buy and sell, and in any and every way deal in, either in its own right, or upon consignment, as factor, broker, or otherwise, carriages, wagons, buggies, and vehicles of all descriptions, horses and harnesses; to own, conduct, manage and control a general merchandise business for the sale of hay, grain, and all other species of personal property; to acquire and own stables and repositories for the housing of its merchandise, goods and wares; to in any and every way deal in, hold and own, all kinds of real and personal property; to make contracts, and acquire and transfer property, with all the powers and privileges in such respects as a natural person might or may have; and generally to do such other acts and things as may be necessary, useful or convenient to the proper conduct of the business of said corporation in the Territory of Arizona, or elsewhere, not contrary to the laws of the United States, or said Territory of Arizona.

III. The authorized amount of capital stock of this corporation shall be twenty-five thousand (\$25,000) dollars, divided into two hundred and fifty (250) shares of the par value of one hundred (\$100) dollars each; which said stock shall be sold, either for cash, or in exchange for personal and real property, to enable said corporation to acquire property necessary to carry on its business; balance, if any, to remain in the treasury subject to the disposition of the board of directors by a majority vote thereof. All stock to be forever non-assessable.

IV. The time of the commencement of this corporation shall be the date of the filing of a certified copy of these articles with the Territorial Auditor, in the manner provided by law, and the termination thereof shall be twenty-five years thereafter.

V. The affairs of this corporation shall be conducted by a board of directors, said board to consist of three members. For the transaction of the business of this corporation there shall also be elected by the board of directors the following officers: A president, secretary, treasurer and manager, and such other officers as said board may hereafter determine to be necessary. Two of such officers may be held by one person. The board of directors shall be elected at the regular annual meeting of the stockholders to be held on the first Monday in April of each year. Such directors shall hold office for the term of one year; and until their successors are elected and qualified. The board of directors who shall have charge of the affairs of this corporation until the first meeting of stockholders as provided herein, are as follows:

James E. Brophy, Thomas J. Brophy and Hugh J. Brophy.

VI. The highest amount of indebtedness or liability, direct or contingent to which this corporation is at any time to subject itself, shall be two-thirds of its capital stock.

VII. The private property of the stockholders shall be exempt from liability or execution for the debts of the corporation.

In witness whereof, the incorporators have hereunto set their hands, at Bisbee, Arizona, the 9th day of April A. D. one thousand nine hundred and four.

JAMES E. BROPHY,
THOMAS J. BROPHY,
HUGH J. BROPHY.

Territory of Arizona)
County of Cochise,) ss

Before me, Edw. J. Flanagan, a notary public, in and for the County of Cochise, Territory of Arizona, on this day personally appeared James E. Brophy, Thomas J. Brophy and Hugh J. Brophy, known to me to be the persons whose names are subscribed to

the foregoing instrument, and each acknowledged to me that he executed the same for the purpose and consideration therein expressed.

Given under my hand and seal of office this 9th day of April, A. D. 1904.
EDW. J. FLANAGAN,
Notary Public.

My commission expires Mar. 8, 1907.
4-24-04.

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FROM PHOENIX	STATIONS	TOWARDS PHOENIX
5:10 p.m. 8:50 a.m. 7:00 p.m.	Phoenix.....Ar	5:36 a.m. 7:41 a.m. 2:16 p.m.
5:29 p.m. 9:09 a.m. 7:20 p.m.	Tempe.....Ar	5:52 a.m. 8:04 a.m. 2:35 p.m.
5:48 p.m. 9:28 a.m. 7:39 p.m.	Maricopa.....Ar	6:11 a.m. 8:23 a.m. 2:54 p.m.

Mesa Branch

TOWARDS MESA	STATIONS	FROM MESA
5:38 p.m. 9:12 a.m. 7:07 p.m.	Tempe.....Ar	7:19 a.m. 1:49 p.m.
5:57 p.m. 9:31 a.m. 7:26 p.m.	Mesa.....Ar	7:38 a.m. 2:08 p.m.

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President.

M. O. Bicknell
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